A USDA-ERS BRIEFING BOOKLET

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THE BASIC MECHANISMS OF U.S. FARM POLICY

PART ONE:

Target, Loan, & Deficiency

How They Work

PREFACE

Many kinds of people -- not only farmers but also Representatives, congressional staff, lobbyists, new employees of USDA, and interested public -- come to USDA looking for a quick way to understand farm policy. This series of booklets is addressed to that wide audience and is intended as an introduction to the key concepts.

The booklet is meant to work in the same general way as an informal briefing, such as one given with a series of overhead transparencies. Each page of the booklet contains a single "screen" of illustrative material, accompanied above and below by an "instructor's comments" -- all of which is followed by a question to the reader. The answer to each such question will be found on the next page of the briefing.

This booklet is based on materials supplied by Keith Collins of the Economic Analysis Staff and by various researchers in the Economic Research Service of the U.S. Department of Agriculture. It was prepared by William J. Hudson (The ProExporter Network, Maumee, Ohio), under contract with the Economic Research Service.

The complete array of farm policy mechanisms can appear overwhelming to anyone unfamiliar with the history of U.S. agricultural legislation.

SOME BASIC MECHANISMS OF U.S. FARM POLICY

Target Price
Loan (Nonrecourse loan) Rate
Deficiency Payment
Original Deficiency
Reduced (Findley) Loan Rate
Emergency Compensation
Acreage Reduction Program (ARP)
Paid Diversion
Base Acres
Program Yield
Program Production
Basic Commodities
Acreage Conservation Reserve
Conservation Use
Payment Limitation
Estimated Deficiency
Advanced Deficiency
Farmer-Owned Reserve
Reserve Rollover
Payment-In-Kind (PIK)
Commodity Certificate
PIK and Roll
Zero-92 and 50-92
Export Enhancement
Posted County Price (PCP)
Corn (& Wheat) Catalog
Conservation Reserve
Disaster Payment
Marketing Loan

Many more mechanisms could be listed, from the last six decades of agricultural policy.

Question: Where do all of these mechanisms originate?

Strictly speaking, policy mechanisms originate in Congress. But Congress reflects public concerns about food, agriculture, and the needs of farmers.

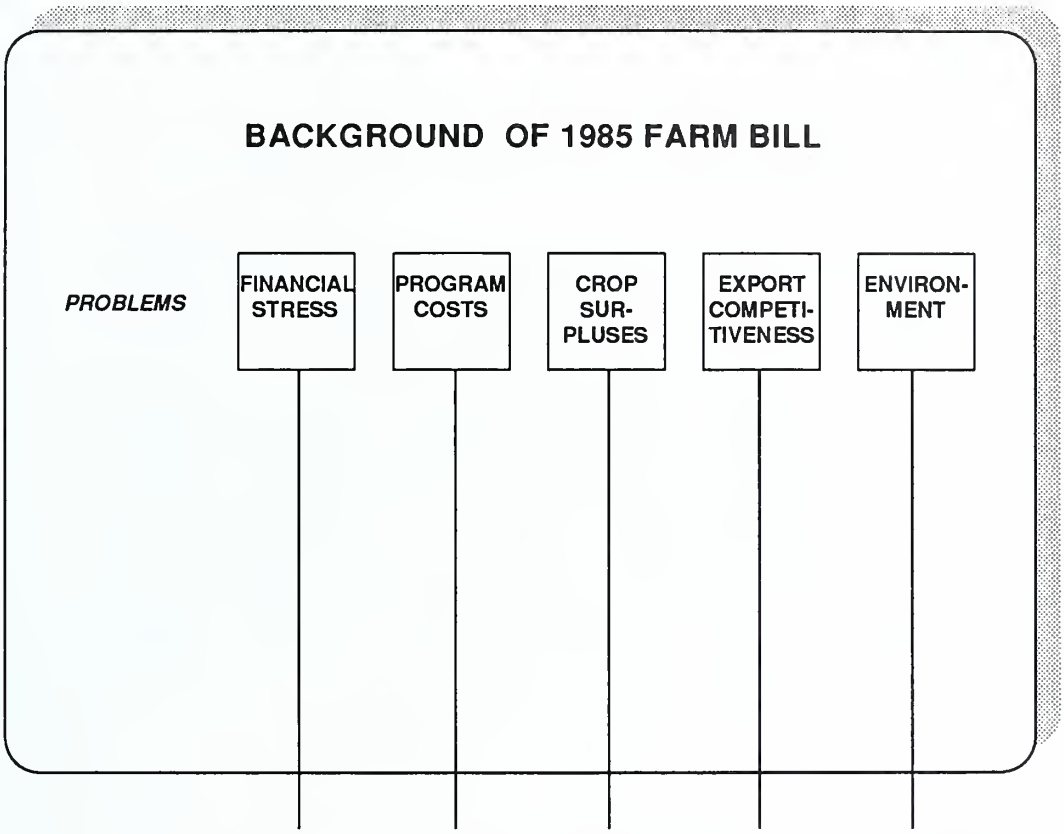
APPROACH OF THIS BRIEFING

The best approach to explaining farm policy looks at the following three steps:

1. The public concerns that led to the policy
2. The policy mechanisms as seen by the farmer
3. The cost of the policy as seen in USDA's budget

Question: When was the last major Farm Bill passed in the United States?

Congress passed the "Food Security Act" of 1985 almost 5 years ago, and will consider new legislation in 1990.



These were the five main areas of public concern that the 1985 Farm Bill attempted to cover.

Question: Can you recall any examples of these five problem areas?

In the early 1980's, the world economy had weakened, and United States grain exports had fallen sharply -- causing a whole series of troubles. Many farmers had debt problems and mortgage foreclosures.

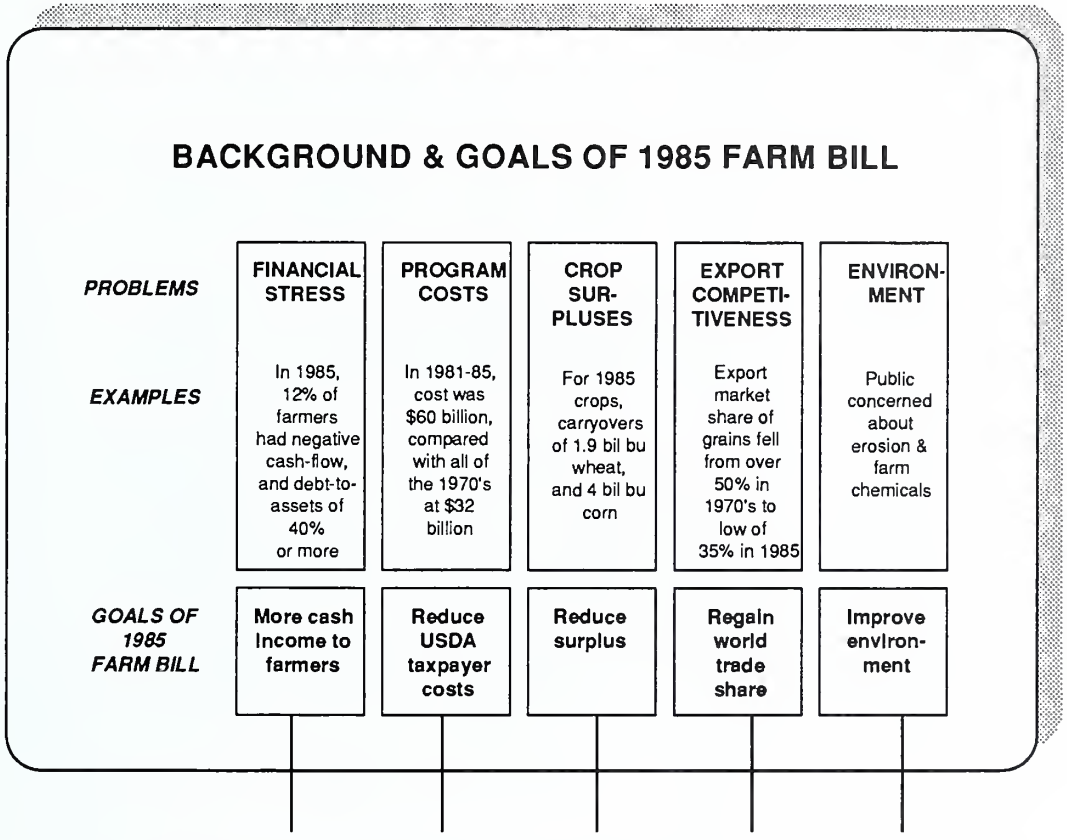
BACKGROUND OF 1985 FARM BILL

	FINANCIAL STRESS	PROGRAM COSTS	CROP SUR-PLUSES	EXPORT COMPETI-TIVENESS	ENVIRON-MENT
PROBLEMS					
EXAMPLES	In 1985, 12% of farmers had negative cash-flow, and debt-to-assets of 40% or more	In 1981-85, cost was $60 billion, compared with all of the 1970's at $32 billion	For 1985 crops, carryovers of 1.9 bil bu wheat, and 4 bil bu corn	Export market share of grains fell from over 50% in 1970's to low of 35% in 1985	Public concerned about erosion & farm chemicals

Examine all of these examples, and try to bring back the atmosphere under which the 1985 Farm Bill was developed. This will help in understanding the policy mechanisms that were used.

Question: What were the goals of the 1985 Farm Bill?

The goals were basically to turn the conditions around, so that good farmers could stay in business.



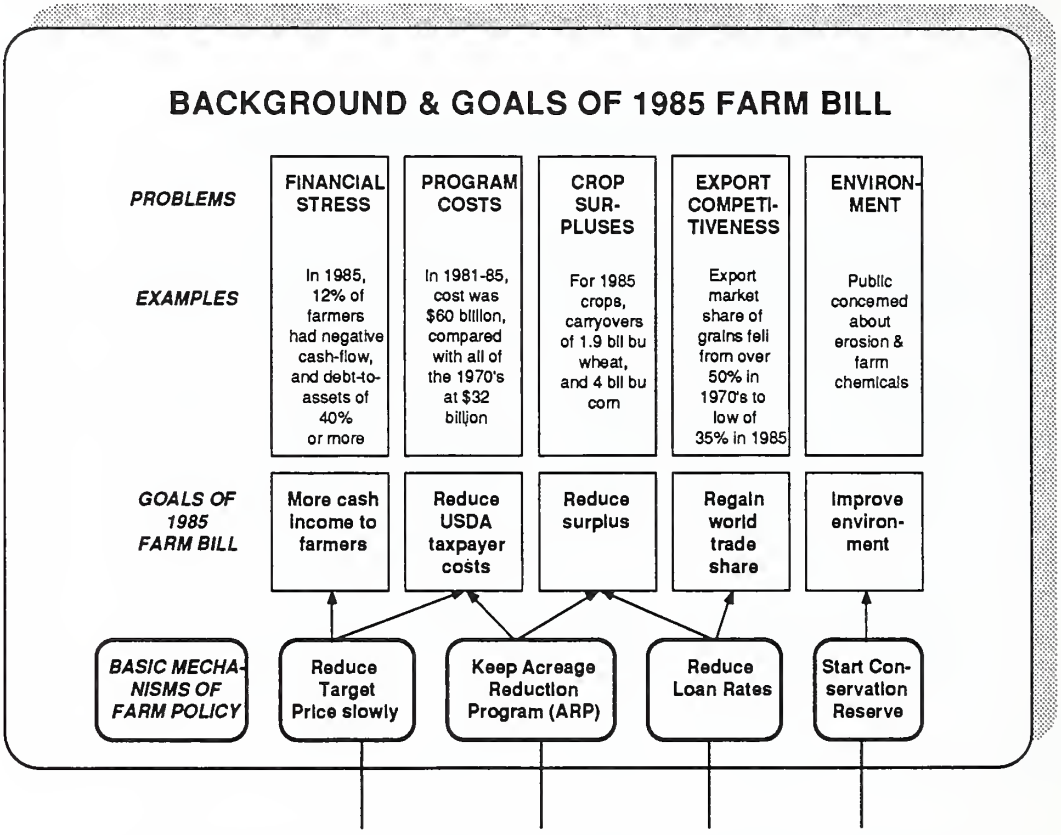
These are the five goals of the 1985 Farm Bill. One of the first things to recognize is that some of these goals conflicted with each other -- for instance, in order to get more cash to farmers, you run the risk of increasing, not decreasing, the USDA budget and taxpayer costs.

<u>Question</u>: Which three main mechanisms of farm policy did Congress draw on to achieve the above set of goals?

The three main mechanisms used in the 1985 Farm Bill are:

-- Target Price,
-- Loan Rate,
-- and Acreage Reduction Programs.

These mechanisms were not new in 1985, but the way they were used was a change.



These are the three main mechanisms used in the 1985 Farm Bill, and we will examine exactly how they work in the remainder of this booklet.

This mechanism will be explained later, in Part Two.

Question: What agencies within the USDA are responsible for administering the farm policy enacted by Congress?

USDA administers the programs through two main agencies as follows:

TWO KEY USDA AGENCIES IN ADMINISTERING FARM POLICY

- **ASCS (Agricultural Stabilization and Conservation Service)**

  A USDA agency responsible for administering farm price and income support programs as well as conservation and forestry cost-sharing programs; local ASCS committees and offices are maintained in nearly all farming counties.

- **CCC (Commodity Credit Corporation)**

  A wholly owned Federal corporation within USDA. CCC functions as the financial institution through which payments are made. CCC borrows money from the Treasury to make payments to farmers, and repays the Treasury with receipts (from loan payments or sales) and with congressional appropriations.

Let's take another look at the list of agricultural policy mechanisms.

This booklet deals mainly with Target Price, Loan Rate, and Deficiency Payment. But several other mechanisms can be understood at the same time -- for instance, it will be natural to examine ARP, Paid Diversion, Base Acres, and a few others, as shown below.

SOME BASIC MECHANISMS OF U.S. FARM POLICY

Target Price	Estimated Deficiency
Loan (Nonrecourse loan) Rate	Advanced Deficiency
Deficiency Payment	Farmer-Owned Reserve
Original Deficiency	Reserve Rollover
Reduced (Findley) Loan Rate	Payment-In-Kind (PIK)
Emergency Compensation	Commodity Certificate
Acreage Reduction Program (ARP)	PIK and Roll
Paid Diversion	Zero-92 and 50-92
Base Acres	Export Enhancement
Program Yield	Posted County Price (PCP)
Program Production	Corn (& Wheat) Catalog
Basic Commodities	Conservation Reserve
Acreage Conservation Reserve	Disaster Payment
Conservation Use	Marketing Loan
Payment Limitation	

Part One of this series of booklets will concentrate on the left-hand side of this list.

Part Two will explore the mechanisms on the right-hand side of this list.

Make a Guess: In terms purely of cash transfers to farmers, which mechanism on the left side of the list is most important?

The Deficiency Payment is usually the mechanism which routes the most money to farmers.

Read the following definition, and then we'll work through some examples.

DEFICIENCY PAYMENT

Definition

A government payment made to farmers who participate in feed grain, wheat, rice, or upland cotton programs. The payment rate is per bushel, pound, or hundredweight, based on the difference between a target price and the market price or the loan rate, whichever difference is less. The total payment a farm receives is the payment rate multiplied by the eligible production.

Notice that in order to receive a Deficiency Payment, farmers must participate -- which means that they must have officially assigned "Base Acres" and "Program Yield," and that they must comply with any "Acreage Reduction Program."

These are known as the "Basic Commodities." The feed grains include corn, sorghum (milo), oats, and barley.

Question (take a stab!): If Target is $3.03 per bu. and market price is $1.94, then how much is the Deficiency Payment Rate?

In its simplest form, the Deficiency Payment Rate is calculated as the difference between Target and market price, which means that the answer in this case would be $1.09 per bushel..

CALCULATING DEFICIENCY PAYMENT RATE

Simplest Case

	Corn (1987)
Target Price	$3.03
Market Price	$1.94
Deficiency Payment Rate	$1.09

In the Deficiency mechanism, Congress sets a "Target" price, which is its judgment of a desirable return to corn farmers. If the actual market price of corn is below this Target (i.e. deficient), then Congress authorizes USDA to make farmers a payment of the difference, and this payment is called the "Deficiency Payment Rate."

Question: Was there more to the definition of "Deficiency Payment Rate" than just "Target" and "market" price?

Yes, the "Loan Rate" has an important role in calculating Deficiency Payment. Let's take another careful look at the definition.

DEFICIENCY PAYMENT

Definition

A government payment made to farmers who participate in feed grain, wheat, rice, or upland cotton programs. The payment rate is per bushel, pound, or hundredweight, based on the difference between a target price and the market price or the loan rate, whichever difference is less. The total payment a farm receives is the payment rate multiplied by the eligible production.

Notice that the calculation of Deficiency Payment Rate requires two steps. First you compare Target with market, and then you compare Target with Loan. Whichever of the two differences is smallest becomes the so-called Deficiency Payment Rate.

Question: Suppose Target is $3.03, market is $1.94, and Loan is $1.82. What is Deficiency?

In this case, the difference between Target and market will be less than the difference between Target and Loan.

To calculate Deficiency requires two steps, as shown below.

CALCULATING DEFICIENCY PAYMENT RATE
Actual Case

		CORN (1987)
Step 1	Target price	$3.03
	Market price	$1.94
	Difference	$1.09
Step 2	Target price	$3.03
	Loan rate	$1.82
	Difference	$1.21

In this two-step process, the smallest difference becomes the Deficiency Payment Rate, which in this case is $1.09.

Question: What is meant by a "Loan Rate," and how does Congress determine at what level to set these figures?

Basically, Congress sets a "Target" of the price it believes would provide a reasonable return to farmers, and then it sets a "floor," which is a price below which Congress believes the farmer should not have to sell. The "floor" is called the "Loan Rate."

LOAN RATE

Definition

The rate at which the government will provide a loan to farmers to enable them to hold their crops for sale at some later date. Only farmers participating in farm programs are eligible for loans. The loan rate is per bushel, pound, or hundredweight of production, and the term of the loan is usually 9 months.

The loan is "nonrecourse." This means that the government has no recourse but to take the crop itself in repayment of the loan, if the farmer so desires -- no matter how far market price may have fallen.

The U.S. Government makes this "nonrecourse" pledge to American farmers, and thus the U.S. market price has a hard time declining below the U.S. Loan Rate -- because at prices near or below the Loan Rate, farmers turn their grain over to the government rather than sell it on the market. In this sense, the Loan is a "floor."

<u>Question</u>: Do all the "Basic Commodities" have the same Deficiency Payment Rate?

No. Each one of the Basic Commodities has a different set of Target Prices and Loan Rates, and thus different Deficiency Payment Rates.

CALCULATING DEFICIENCY PAYMENT RATE
Actual Case

		CORN (1987)	WHEAT (1987)
Step 1	Target price	$3.03	$4.38
	Market price	$1.94	$2.60
	Difference	$1.09	$1.78
Step 2	Target price	$3.03	$4.38
	Loan rate	$1.82	$2.28
	Difference	$1.21	$2.10

In 1987, for both corn and wheat, the Deficiency Payment Rate turned out to be the difference between Target and market, rather than the difference between Target and Loan.

Question: When was the last time that the condition occurred, let's say for corn, when market price fell below the Loan Rate?

1986 was the last year that market price was below the Loan Rate-- which shows that Loan is not an <u>absolute</u> "floor" for price.

In every year, the Deficiency Payment Rate is calculated in a two-step procedure which determines the smallest difference -- either between Target and Market, or between Target and Loan.

CALCULATING DEFICIENCY PAYMENT RATE
Actual Cases for Past Four Years

		CORN (1985)	CORN (1986)	CORN (1987)	CORN (1988)
Step 1	Target price	$3.03	$3.03	$3.03	$2.93
	Market price	$2.23	$1.50	$1.94	$2.50
	Difference	$0.80	$1.53	$1.09	$0.43
Step 2	Target price	$3.03	$3.03	$3.03	$2.93
	Loan rate	$2.55	$1.92	$1.82	$1.77
	Difference	$0.48	$1.11	$1.21	$1.16

Market price was below Loan Rate

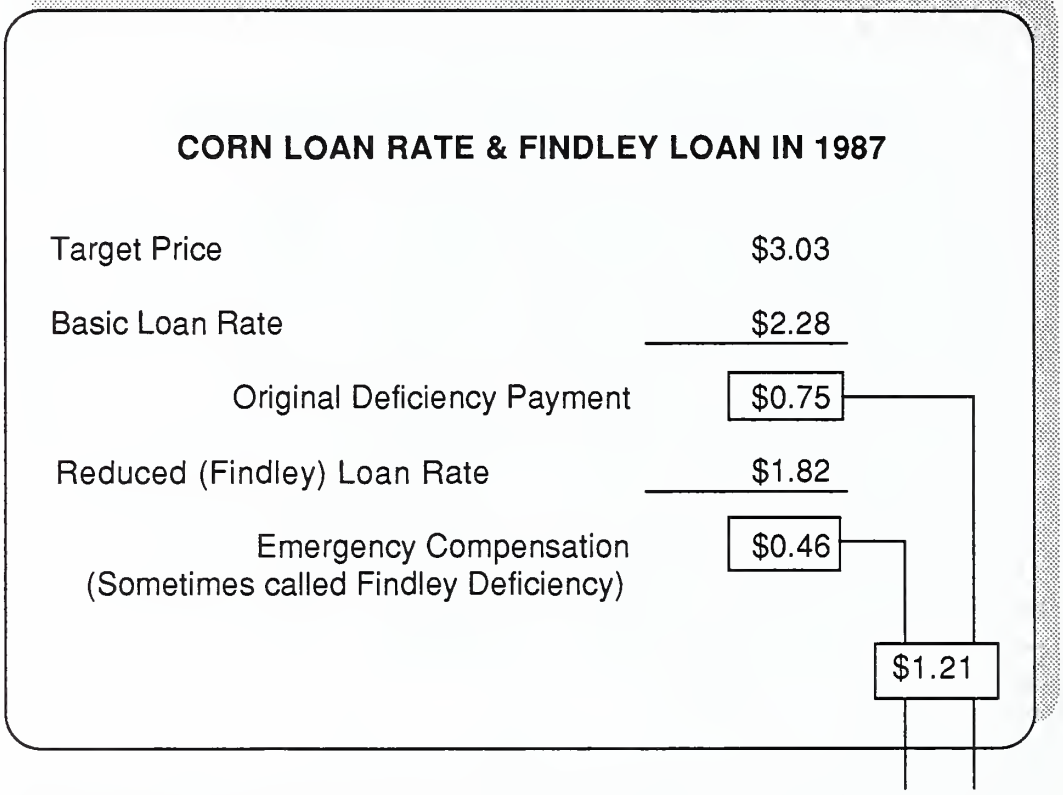
Market price was above Loan Rate

Let's take a closer look at the corn Loan Rate for 1987, and examine one of the "fine points" of the 1985 Farm Bill.

The 1985 Farm Bill permitted the Secretary to set the Loan Rate based on past market prices, but limited to a 5-percent annual drop. For 1987, this "Basic" Rate could be no lower than $2.28. But the bill gave the Secretary discretion to announce a Rate up to 20 percent lower, the so-called Reduced (Findley) Loan Rate, which was $1.82

The names for these two tiers of Deficiency are given below.

CORN LOAN RATE & FINDLEY LOAN IN 1987



The maximum possible "Total Deficiency Payment Rate" is $1.21. But the actual Rate was only $1.09. The actual Rate did not reach the maximum because market price did not fall to Loan ($1.82). Market price fell only to $1.94, which meant that the actual Deficiency Payment Rate was $3.03 - $1.94 = $1.09.

Question: Is the farmer subject to limits on the amount of Deficiency Payment?

The payment limit is $50,000 for Original Deficiency, and $250,000 for Original Deficiency and Emergency Compensation together.

PAYMENT LIMITS

Annual Payment Limit	Payments Subject To:
$50,000	Deficiency (Target Price less Basic Loan Rate)
	Paid Land Diversion
$250,000	Same as $50,000 plus: Findley Payments (Basic Loan less Reduced Loan)
	Disaster Payments
No Limit	Nonrecourse Loans

Question: How do farmers decide whether to participate in farm programs?

Farmers compare what they would make with and without the government payment. They first calculate their expected bushels of production, estimate the price per bushel, and then subtract the cost of production from the sales revenue. This figure of net income must then be calculated two ways, with and without the effects of participating in the government program.

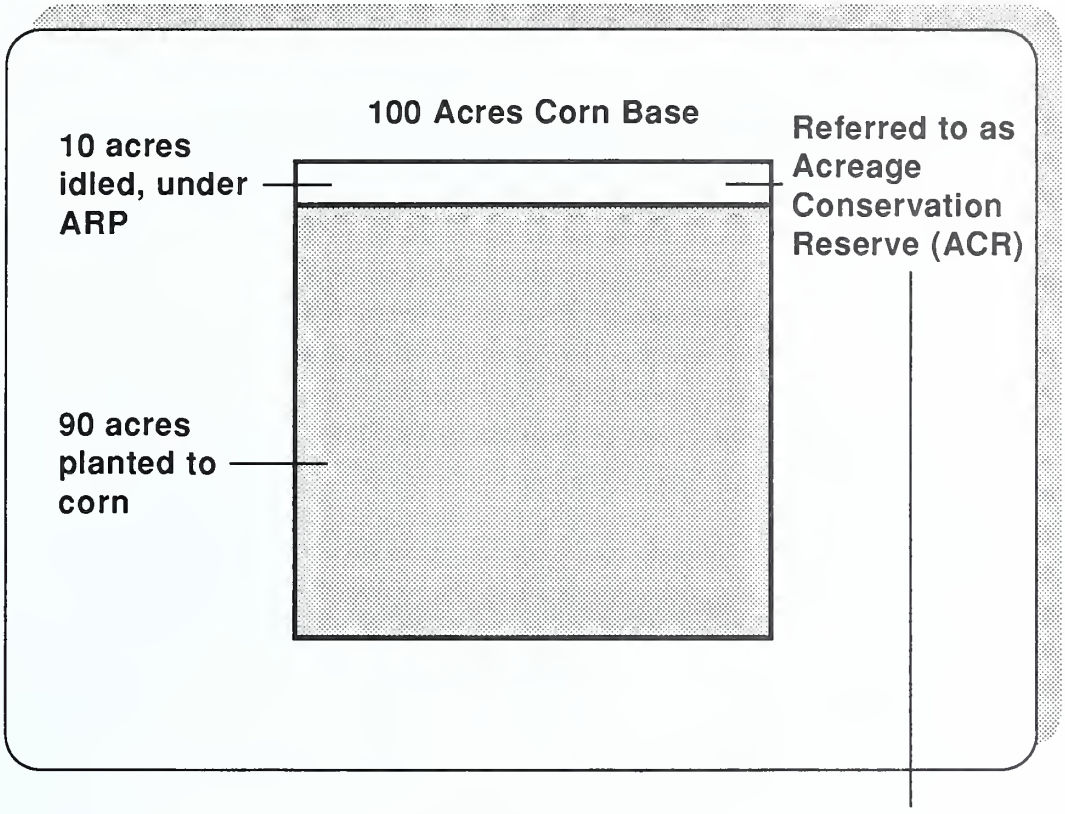
BASIC CALCULATION OF FARM INCOME
Before Participation

	Amount	Unit
Acres planted	100	acres
x Normal Yield	x 135	bushels/acre
= Production	13,500	bushels
x Market price	x$2.25	$/bushel
= Sales	$30,375	$
- Production Cost (at $175/acre)	($17,500)	$
= Net Income	$12,875	$

The problem that the farmer has is that price is not set ahead of time, it must be projected.

The complexity of calculations goes up dramatically when we include the option of participating in government programs.

Let's take the case of a farmer with "Official Base Acres" for corn at 100 acres. To qualify for a Deficiency Payment (in 1989), the farmer must divert 10% of the base away from corn and into Conservation Use.



ACR land must be put into an approved Conserving Use that protects the land from weeds, and from wind and water erosion.

The farmer's next step is to calculate the costs and likely returns in two cases, participating in ARP and not participating in ARP.

Below we show the farmer's income without participating, and on the next page we show the same thing with participating.

ACCOUNTING METHOD FOR EVALUATING GOVERNMENT PROGRAM PARTICIPATION

	Units	No ARP
Base Acres	*acres*	100
Req'd Conservation Use	*acres*	10
Permitted Acres	*acres*	90
Planted Acres	*acres*	100
Actual Yield	*bu/ac*	135
Production	*bushels*	13500
Sell at elevator bid	*$/bu*	$2.25
Revenue from sale	*$*	$30,375
Put under loan at	*$/bu*	$1.65
Revenue from loan	*$*	$0
Eligible Planted Acres	*acres*	90
Program Yield	*bu/ac*	115
Program Production	*bushels*	10350
Deficiency Payment Rate	*$/bu*	$0.59
Revenue from Deficiency	*$*	$0
Revenue	*$*	$30,375
Planted Acres	*acres*	100
Production Cost	*$/ac*	$175
Total Production Cost	*$*	-$17,500
Income	*$*	$12,875

Farmer who plants all 100 base acres to corn gets revenue from market, but does not qualify for a loan or a deficiency payment.

The figures below show that with market price in the range of $2.25, the farmer makes more income by complying with a 10% ARP, and getting a Deficiency Payment in return.

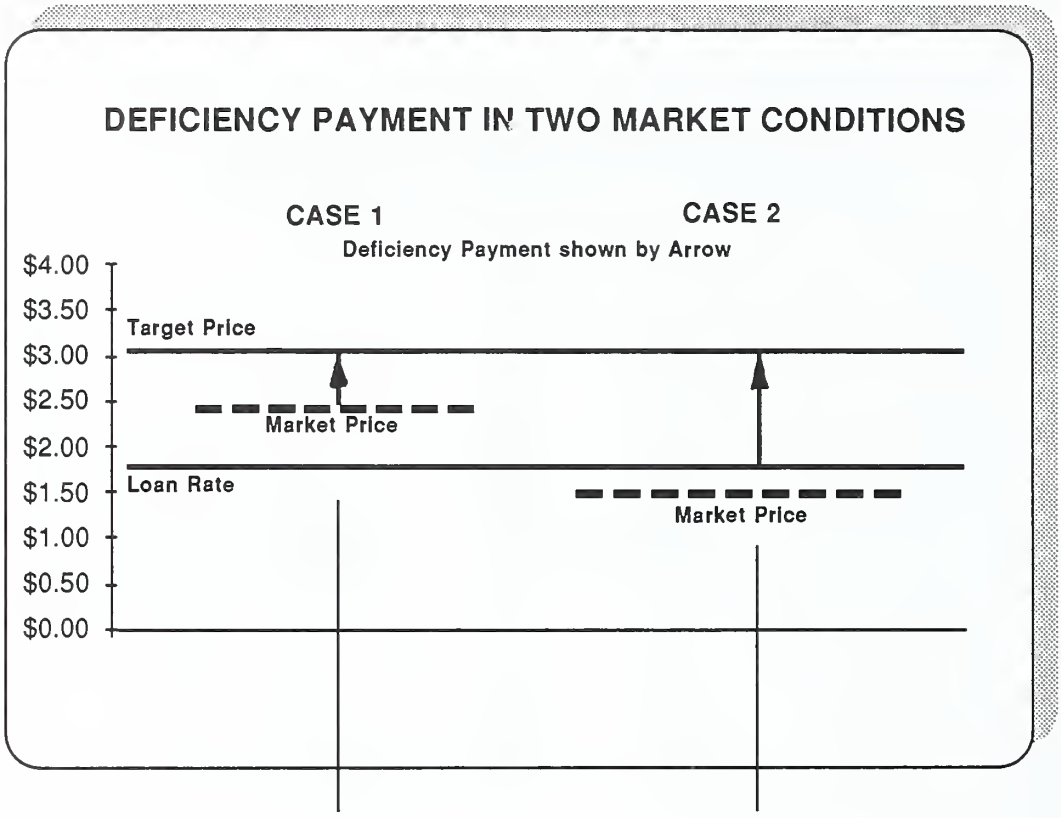
ACCOUNTING METHOD FOR EVALUATING GOVERNMENT PROGRAM PARTICIPATION

	Units	No ARP	ARP
Base Acres	*acres*	100	100
Req'd Conservation Use	*acres*	na	10
Permitted Acres	*acres*	na	90
Planted Acres	*acres*	100	90
Actual Yield	*bu/ac*	135	135
Production	*bushels*	13500	12150
Sell at elevator bid	*$/bu*	$2.25	$2.25
Revenue from sale	*$*	$30,375	$27,338
Put under loan at	*$/bu*	$1.65	$1.65
Revenue from loan	*$*	$0	$0
Eligible Planted Acres	*acres*	90	90
Program Yield	*bu/ac*	115	115
Program Production	*bushels*	10350	10350
Deficiency Payment Rate	*$/bu*	$0.59	$0.59
Revenue from Deficiency	*$*	$0	$6,107
Revenue	*$*	$30,375	$33,444
Planted Acres	*acres*	100	90
Production Cost	*$/ac*	$175	$175
Total Production Cost	*$*	-$17,500	-$15,750
Income	*$*	$12,875	$17,694

Revenue from sale of bushels goes down, because of the 10 acres idled, but the deficiency payment more than makes up for it (at these price assumptions).

Question. What happens to USDA's budget when market prices are low, and when they are high?

The chart below shows two cases, one with high market price, and one with low.



When market price is high, Deficiency is small.

When market price is low, Deficiency is large.

Question: (take a stab) If the Deficiency Payment Rate is $0.59 per bushel for corn, and the crop is normal size, how much money will USDA have to pay (in billions of dollars)?

If Deficiency is just under a dollar a bushel, and if the corn crop is several billion bushels, then the overall Deficiency Payment by USDA must be several billion dollars.

Below is a simplified calculation.

ESTIMATED COST OF CORN DEFICIENCY TO USDA BUDGET

	Amount	Unit
Base Acres	83.3	mil acres
Participation Rate	x 75%	
= Acres Enrolled	62.5	mil acres
x ARP % Required	x 10%	
= Acreage Conservation Reserve	6.3	mil acres
Enrolled Acres	62.5	mil acres
ACR	-6.3	mil acres
Program Acres	56.2	mil acres
Average Program Yield	x 105	bushels/acre
Total Program Production	5900	mil bushels
Eligible for Deficiency	5900	mil bushels
Deficiency Payment Rate	x$0.59	$
Deficiency Payment	$3,500	mil $

In this example, each 10-cent decline in the market price of corn means nearly $600 million in Deficiency Payments by USDA.

Question: How much does USDA pay for all the Basic Commodities and other crop subsidies?

If corn is $3 billion for Deficiency alone, then the total for all crops will be over $10 billion. The total changes every year, depending on market prices and on the USDA program itself.

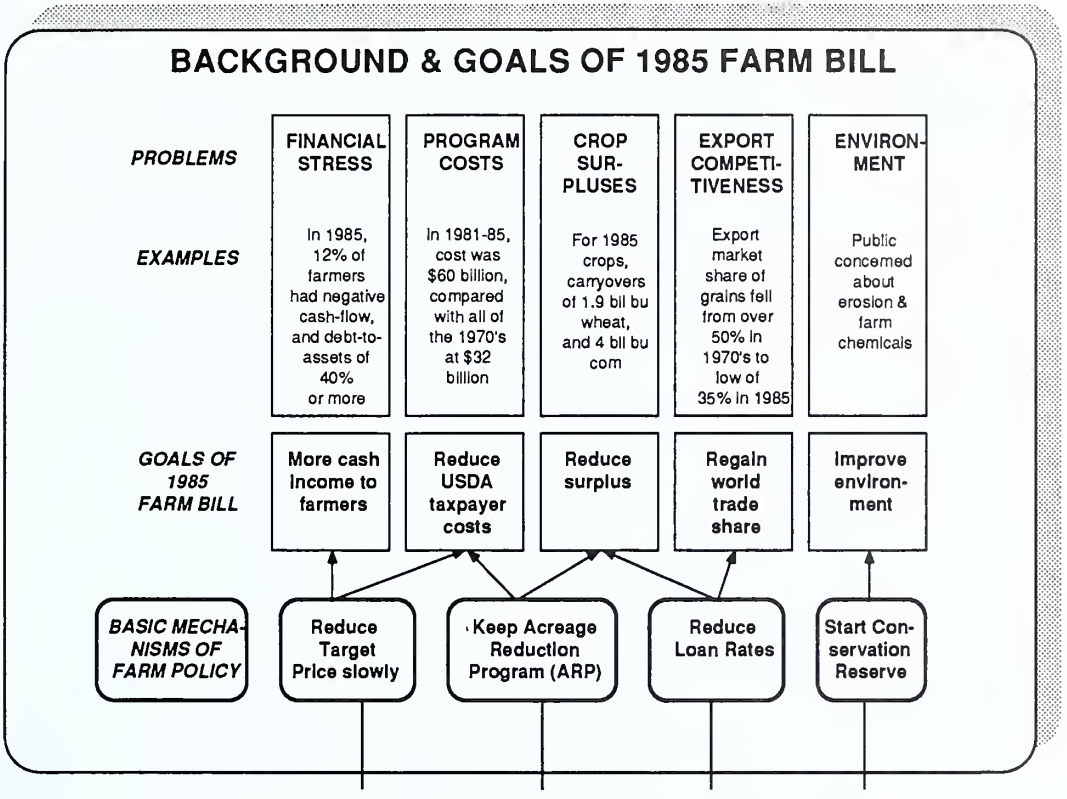
Here's how it looked in 1988.

USDA OUTLAYS BY COMMODITY (FISCAL 1988)

Feed grains (incl. corn)	9,053	mil $
Wheat	678	
Rice	128	
Upland Cotton	666	
Tobacco	-453	
Dairy	1,295	
Soybeans	-1,676	
Peanuts	7	
Sugar	-247	
Honey	100	
Wool	5	
Operating Expense	621	
Interest Expense	395	
Export Programs	193	
Other	1,696	
Total	12,461	mil $

Question: What were the public policy concerns that led to the above expenditure of over $12 billion, and what were the goals of the 1985 Farm Bill?

The goals of the 1985 Farm Bill were to turn the conditions around -- to help relieve financial stress among farmers, to reduce taxpayer costs, to reduce surplus, to regain world trade share, and to improve the environment.



These are the three main mechanisms used in the 1985 Farm Bill, and we have examined how they work in the this booklet.

This mechanism will be explained in Part Two.

The purpose of this booklet was to introduce the basic mechanisms of U.S. Farm Policy, especially Target Price, Loan Rates, and Deficiency Payments. Many further details remain, and these are covered in Part Two.

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